Appl. No. 10/054,134   APP 1400
Amdt. Dated December 6, 2005
Reply to Office action of September 6, 2005

Listing of Claims

Claims 1- 24 (canceled)

Claim 25 (new) A method for avoiding transmission interference between transmission paths over which packets are transmitted to separate Bluetooth-enabled elements in independent channel hopping patterns exhibiting quasi-random frequencies in successive time slots, the respective patterns each having a packet sized equal to a selectable number of time slots and wherein frequency collisions can occur between transmissions on a pair of channels, said method comprising the steps of:

extracting corresponding segments of the respective channel hopping patterns that occur over a selectable number of future time slots,

comparing the corresponding extracted segments to detect a first future time in which the frequency hops of the corresponding segments coincide indicating a predicted frequency collision between transmissions on a pair of channels, and

changing the size of the packets on one of the channels to allow transmission to proceed simultaneously on both of the channels where the collision was predicted.

Claim 26 (new) A Bluetooth-enabled terminal for the simultaneous transmission of packets over channels to separate Bluetooth enabled devices without loss of packet communication due to collisions in channel time slots, said terminal comprising

a pair of radio interfaces for transmission of packets to separate Bluetooth elements,

a base band controller for modulating the frequencies to be transmitted to the Bluetooth elements with separate channel hopping patterns exhibiting frequency hops in successive time slots, said frequencies being within a band defined by Bluetooth protocols,

a prediction circuit for predicting a future time slot when the frequency hops of the respective channel hopping patterns will coincide and cause a collision in a time slot, and

a pattern adjustment circuit responsive to said prediction circuitry for causing said base band controller to alter the frequency hops on one of the channels to change the size of the packets on said one channel to allow transmission to proceed simultaneously on both of the channels where the collision was predicted.

Claim 27 (new) The Bluetooth-enabled terminal of claim 26 wherein said prediction circuit comprises

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a replicator unit that extracts for future time slots corresponding segments of the channel hopping patterns and

a test circuit which compares the frequency hops of the corresponding segments to determine which, if any, of the time slots reflect a coincidence of the hops, thereby indicating a potential collision.

Claim 28 (new) The Bluetooth-enabled terminal of claim 27 further comprising

a memory connected to said replicator unit,

a core connected to said base band controller and said memory, and

a system clock connected to said core and said base band controller.